CLAIMS

1. A vibration damper for inhibiting transfer of vibration to an apparatus during the evacuation thereof by a pump, the damper comprising a bellows arrangement for isolating from the ambient atmosphere, fluid drawn from the apparatus by the pump, and means for limiting axial compression of the bellows arrangement during use of the damper, wherein the damper is axially pre-compressed.

2. A vibration damper according to Claim 1, wherein the bellows arrangement is integral with the pump.

3. A vibration damper according to Claim 1 or Claim 2, wherein one end of the bellows arrangement is directly attached to the pump.

4. A vibration damper according to Claim 3, wherein said one end of the bellows arrangement is directly attached to a flange integral with the housing of the pump.

5. A vibration damper according to Claim 3 or Claim 4, wherein the other end of the bellows arrangement is attached to a flange for connecting the pump to the apparatus.

6. A vibration damper according to Claim 1, comprising means for connecting the damper between the apparatus and the pump.

7. A vibration damper according to Claim 6, wherein the connection means comprises first and second flanges each attached to a respective end of the bellows arrangement and connectable to a respective one of the pump and the apparatus.

8. A vibration damper according to any preceding claim, wherein the bellows arrangement defines at least part of a flow path for fluid drawn from the apparatus by the pump.

9. A vibration damper according to any preceding claim, wherein the damper is axially pre-compressed by means for limiting axial extension of the bellows arrangement.

10. A vibration damper according to Claim 9, wherein the extension limiting means is attached to at least one end of the bellows arrangement.

11. A vibration damper according to Claim 9 or Claim 10, wherein the extension limiting means comprises first and second co-operating members each attached to a respective end of the bellows arrangement.

12. A vibration damper according to Claim 11, wherein each member comprises a V-shaped member attached to diametrically opposed locations on the respective end of the bellows arrangement such that the members co-operate to draw the ends of the bellows arrangement together so as to pre-compress the damper.

13. A vibration damper according to Claim 11 or Claim 12 when dependent from Claim 7, wherein each member is connected to the respective end of the bellows arrangement via a respective flange.

14. A vibration damper according to Claims 7 and 9, wherein the extension limiting means comprises an axially extending member attached to one of the flanges and engaging the other flange to pre-compress the damper.

15. A vibration damper according to Claim 14, wherein the axially extending member passes through an aperture located in the other flange, a distal part of the axially extending member engaging the other flange.

16. A vibration damper according to any preceding claim, wherein the means for limiting axial compression comprises resistive means arranged under tension in such a way that when the damper is subjected to an external axial force tending to compress the bellows arrangement, the resistive means is subjected to a tensile force, the resistance to extension of the resistive means opposing axial compression of the bellows arrangement.

17. A vibration damper according to Claim 16, wherein the bellows arrangement extends about an axis and the resistive means is arranged about said axis.

18. A vibration damper for inhibiting transfer of vibration to an apparatus during the evacuation thereof by a pump, the damper comprising a bellows arrangement for isolating from the ambient atmosphere, fluid drawn from the apparatus by the pump, the bellows arrangement extending about an axis, and resistive means arranged about said axis and under tension in such a way that when the damper is subjected to an external axial force tending to compress the bellows arrangement, the resistive means is subjected to a tensile force, the resistance to extension of the resistive means opposing axial compression of the bellows arrangement.

19. A vibration damper according to any of Claims 16 to 18, wherein the resistive means is arranged about the damper.

20. A vibration damper according to Claim 16 or Claim 19 when dependent from Claim 2, wherein the resistive means is arranged about the pump.

21. A vibration damper according to Claim 20, wherein the resistive means is attached to the housing of the pump.

22. A vibration damper according to any of Claims 16 to 19, wherein the resistive means is arranged about the bellows arrangement.

23. A vibration damper according to any of Claims 16 to 22, wherein the resistive means comprises a plurality of resistive elements.

24. A vibration damper according to Claim 23, wherein each resistive element comprises a metal coil tension spring.

25. A vibration damper according to Claim 23 or Claim 24, wherein each of the resistive elements is inclined relative to a plane extending orthogonally to said axis.

26. A vibration damper according to any of Claims 23 to 25, wherein each resistive element is attached at one end to a first radially extending flange and at the other end to a second radially extending flange, the first and second radially extending flanges being axially separated.

27. A vibration damper according to Claim 26, wherein said one end of the resistive element is attached to the first radially extending flange via a support member.

28. A vibration damper according to Claim 27, wherein the support member extends through an aperture in the second radially extending flange.

29. A vibration damper according to Claim 27 or 28, wherein the other end of the resistive element is directly attached to the second radially extending flange.

30. A vibration damper according to any of Claims 27 to 29, comprising means for contacting the support member upon rotation of one flange relative to the other to inhibit relative rotational movement therebetween.

31. A pump comprising a vibration damper according to any of Claims 1 to 5 and 8 and 29.